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ABSTRACT

This paper argues: (1) that one of the major syntactic constraints adopted by many proponents of the Extended Standard Theory, namely the Specified Subject Condition (SSC), is empirically inadequate with respect to "unbounded" extraction phenomena; and (2) that the unbounded extraction data which the SSC purported to account for need to be accounted for in nonsyntactic terms. After a review of the research on the subject, Oerle's counterproposal is discussed and found inadequate. A nonsyntactic alternative to the extraction data to which Chomsky and Oerle addressed themselves is offered and the role of context with respect to them is stressed. Finally, it is argued that the SSC is insufficient and unnecessary with respect to unbounded extraction phenomena, and that it cannot be maintained within existing versions of the (Revised) Extended Standard theory, unless one is willing to countenance either an increase in theoretical power, or an unnatural characterization of the class of phenomena which the SSC is supposed to constrain. (Author/AMH)

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ON UNBOUNDED EXTRACTION PHENOMENA AND THE SO-CALLED SPECIFIED SUBJECT CONDITION*

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The central purpose of this paper is to argue that one of the major syntactic constraints proposed in Chomsky (1973) and subsequently adopted by numerous proponents of the Extended Standard Theory (the theory developed in such works as Chomsky, 1970, Jackendoff, 1972, Bresnan, 1972, Emonds, 1976, and most recently revised in Chomsky 1975, 1976), namely, the Specified Subject Condition (SSC) is empirically inadequate both ways with respect to "unbounded" extraction phenomena[1], and that the unbounded extraction data which the SSC purported to account for need to be accounted for in non-syntactic terms (specifically, in terms of notions pertaining to the realms of semantics, pragmatics, and functional sentence perspective).

The paper is organized as follows: In section 0., I introduce the background assumed in the ensuing discussion, in particular, the SSC, the Definiteness Condition (DC) (a condition which Chomsky proposed interacted with the SSC in determining extraction possibilities), and a critique of the DC (Oehrle, 1974). In section 1, I argue that Oehrle's counterproposal to the DC is itself

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inadequate as it stands in a number of respects, and that the SSC is (i) too strong, and (ii) within the Revised Extended Standard Theory of Chomsky (1975, 1976), also too weak (an additional way in which the SSC is too weak is pointed out in section 2.3.). In section 2, I offer a nonsyntactic alternative to the extraction data to which Chomsky and Oehrle addressed themselves and stress the crucial role of context of situation with respect to them. Finally, in section 3, I argue that the SSC not only is insufficient and unnecessary with respect to unbounded extraction phenomena, but also cannot be maintained in general within existing versions of the (Revised) Extended Standard Theory unless one is willing to countenance either an undesirable increase in theoretical power, or an unnatural characterization of the class of phenomena which the SSC is supposed to constrain. In an appendix, I argue that an analysis of extraction from NP proposed in Chomsky (1976), and which differs from the proposal in Chomsky (1973) in certain respects, is at least as objectionable as its predecessor.

0. Background

In Chomsky (1973), a number of proposals were made in an effort to provide a reanalysis of roughly the data for which Ross (1967) had proposed his well-known theory of island constraints. In particular, it was proposed that the following principle constraints the transformational and semantic rules of English, and possibly of all languages (in subsequent works of Chomsky's, the

putative range of applicability of the SSC and other conditions was restricted; see section 1.2.2.):

(1) The Specified Subject Condition (SSC)

No rule can involve X, Y (X superior to Y) in the structure

$$\ldots X \ldots [\ \alpha \ \ldots Z \ \ldots WYV- \ \ldots]$$

where Z is the specified subject of α.

The symbol " " in (1) stands for any cyclic node (i.e., S or NP). To say that an extraction rule "involves" X and Y is to say that some constituent is reordered from the position of Y to that of X; to say that X is superior to Y is to say that every major category which dominates X also dominates Y, but not conversely; to say that Z is a specified subject is to say that either it is lexically non-null or it fails to be "controlled by" (roughly, "coreferential with") some category containing X.

The empirical justification for the SSC came primarily from certain restrictions on the distribution of reflexive and reciprocal pronouns (for a critique of which see Postal, 1976); certain facts involving "bounded" movement rules (such as Raising and Clitic Placement) are also accounted for in terms of the SSC (see Chomsky, 1975, 1976). With respect to unbounded movement rules, however, extraction from clauses offer no support for the SSC, as illustrated by the acceptability of Who do you think [that John saw Ø]?, where who has crossed over John, the specified subject of S_1; to allow for the acceptability of such constructions, Chomsky breaks down unbounded movement rules into successive

cyclic steps, and proposes that clauses have empty positions in the COMP(lementizer) system via which items can escape even in the presence of a specified subject. Evidence that the SSC constrains unbounded movement rules can therefore come only from extraction from NPs, since the latter do not - in Chomsky's theory - exhibit COMP nodes. Now, Chomsky in effect proposes that the SSC accounts for the fact that, for many speakers, (2c) is worse than (2a).

(2) a. Who did you buy a portrait of Ø ?

b. ??Who did you buy the portrait of Ø ?

c. * Who did you buy Mary's portrait of Ø ?

That (2c) violates the SSC follows from the fact that the italicized NP is a cyclic category and that genitive NPs in determiner position (such as Mary's here) count as subjects of their immediately containing NPs. The further contrast between (2a) and (2b) is due - Chomsky proposes - to a further condition, the DC, which disallows the application of rules in situations defined by the first two lines of (1), and where moreover " α " is an NP with a syntactically definite determiner (such as the, this, Mary's, etc.). Finally, the contrast between (2b) and (2c) is attributed to the fact that the former violates only the DC while the latter violates both the DC and the SSC.

It is of some interest that, while earlier writers have challenged the SSC on numerous grounds (see Postal, 1974, 1976, and Bach & Horn, 1976) no one has - to the best of my knowledge - challenged its adequacy with respect to extraction from NPs;

nonetheless - as I shall argue in section 3 - the facts of extraction from NP provide evidence of a particularly strong kind against the SSC. On the other hand, at least one earlier writer (Oehrle, 1974) has recognized the empirical inadequacy of the DC, and it is to his critique of the DC, as well as to his counterproposals to it, that I now turn.

(3) Berenson admires the painting of REMBRANDT.

Oehrle noted that in (3), painting is ambiguous in at least two ways, and claimed that the selection of one of the readings at issue has consequences for the way in which the definite article the is construed. On one reading of painting, the italicized expression designates a physical object representing Rembrandt, and the import of the is that the referent of that expression exists in the universe of discourse of the speaker and listener (by virtue of having been mentioned - directly or by implication - in prior discourse), and can be identified through the recognition of an anaphoric relation between the italicized expression and its antecedent; for example, if (3) occurs immediately after (4) in a discourse, the referent of the italicized expression in the former can, and in most cases probably would, be construed as identical with the referent of the italicized expression in the latter.

(4) Someone has hung a painting of Rembrandt on the wall.

On the second reading of painting, the italicized expression in (3) designates the painting style(s) that is/are supposed to have

been typical of Rembrandt[2]; that is, its referent is identified not in terms of its prior existence in the universe of discourse of the speaker and addressee, but in terms of the knowledge that painters paint in some manner, and that Rembrandt was a painter (from which it can be inferred that he painted in some manner). Having noted the ambiguity just described, Oehrle pointed out that if an element in the position of the capitalized NP in (3) is questioned, as in (5), then the result is acceptable on the "style(s)"[4] reading of painting, a state of affairs, which shows that the DC is too strong.

(5) Who does Berenson (most) admire
the painting of ∅ ?

In attempting to account for the nonexistence of an anaphoric reading for the italicized NP in (5) (actually, Oehrle made the stronger and incorrect claim that a "portrait" reading for painting is impossible in (5)), Oehrle proceeded as follows. First, he pointed to earlir analyses that had systematically associated interrogative wh pronouns with indefinite expressions (e.g., Chomsky, 1964, as well as to the fact that indefinites cannot function as referential anaphors (for example, the two instances of a man in (6) may happen to designate the same individual, but (6) cannot be used to convey the message that the man who dropped dead is precisely the one who came in, as could be done by replacing the rightmost occurrence of a with the or that).

(6) A man came in; a man dropped dead.

Next, Oehrle suggested that there exists a "plausible principle that

referentiality is compositionally determined," and claimed that an NP of the form the N of (Indef) NP_x - where the has anaphoric import - necessarily is referentially self-contradictory since, on the one hand, the entire expression needs to be construed as coreferential with some earlier mention of it (by the anaphoric import of the) while on the other hand, the entire expression needs to be construed as referential with nothing in prior discourse (by the proposed principle of compositionality and the assumption that indefinites cannot be coreferential with previously introduced expressions). An instance of such a self-contradictory expression is, according to Oehrle, the rightmost italicized NP (with the parenthesized material included) which appears in (7) (Oehrle's (34)).

(7) -- Oh, I see you bought a picture of someone$_i$.
-- Yes, for some reason, I thought the picture (*of someone)$_i$ was really quite striking.

Finally, from the (alleged) self-contradictory character of the rightmost italicized NP in (7) and the assumption that interrogative wh pronouns are indefinite, Oehrle concluded that, on the "portrait" reading for painting, the italicized expression in (5) is self-contradictory.

1. Problems with earlier approaches to extraction from NP

1.1. Oehrle's proposal

While Oehrle correctly noted the excessive strength of the SSC, and moreover saw that the facts which the DC purported to

account for were nonsyntactic in nature, his own account is both defective and incomplete in a number of ways; the remainder of this section is devoted to a justification of this claim.

The first problem for Oehrle's account is that it does not offer a viable solution to the impossibility of an anaphoric interpretation for the italicized NP in (5) (or the one in (2b)). Thus, I see no reason for regarding as "plausible" his contention that the reference of an NP is compositionally determined in those cases where it is also anaphorically determined; such a procedure appears redundant, and one has a right to require more than just a plausibility argument before accepting it as valid. However, there is no need for a priori arguments against Oehrle's account, since empirical evidence against it is available. Thus, note that (8) has at least one well formed reading on which the two italicized expressions are coreferential (the import of that is an anaphoric reference to the leftmost italicized NP).

(8) John showed me the portrait of an Albanian woman$_i$; that portrait of an Albanian woman$_i$ was really quite striking.

Since Oehrle's proposal incorrectly predicts unacceptability for (8), we can only conclude that another explanation must be sought for the facts in (7), and - of more immediate concern to us - for lack of an anaphoric reading for the italicized NP in (2b) or (5).

My second objection to Oehrle's account is that, given data like (9a) and (9b),

(9) a. ??Who did you buy THE picture of ∅?

b. *Who did you buy THAT picture of ∅?

c. *Who did you buy a certain picture of ∅?

it predicts ill-formedness just in case the capitalized items purport to establish an anaphoric connection with a mention of the referents of the italicized NPs in prior discourse. However, (9a) and (9b) are also unable to exhibit a reading where the import of the italicized items is to establish a connection with the mental referents of objects that are just "perspicuous" in the nonlinguistic environment, and - as Oehrle himself admits, there is no obvious way in which his account can be naturally generalized to such (undoubtedly) related cases. An even stronger objection is that there is clearly no way in which his account can be generalized to rule out (9c), since the italicized NP is here indefinite. Since indefinite NPs, even specific (as the italicized one in (9c) is), cannot function as referential anaphors (as can be verified by adding certain to the rightmost italicized NP in (6) and noting that this NP can still not be used to signal coreference with the leftmost italicized NP), Oehrle's account fails to predict self-contradictory properties, hence, ill-formedness, for (9c).

My third objection to Oehrle's account is that it makes the incorrect claim that (2b) and (9b) are necessarily ill-formed, and that painting in (5) cannot mean "portrait". A consequence of this incorrect claim is that Oehrle is unable to account for the fact that (9a) is usually judged to be of marginal acceptability

while (9b) and (9c) are completely impossible.[3] In fact, the marginality of (2b) is not due to any syntactic or semantic constraints, but simply to the fact that many speakers have some difficulty in conjuring up an appropriate situational context for it. To see that this is so, imagine a person who has visited a gallery that contained only portraits of famous men (exactly one portrait per distinct famous man) with the intention of buying one portrait; a friend of that person could certainly inquire about the outcome of that visit by uttering (2b), or even better, (10).

(10) Which famous man did you ultimately buy the portrait of ϕ?

The point of the context I have provided has been to reduce (2b) and (10) to the case of (5) on the "style(s)" reading, that is, to a situation where the referents of the appropriate italicized NP are identifiable as a function of the referents of the corresponding extractees.

There is a fourth and final observation that I wish to make with respect to Oehrle's account. Oehrle discusses only instances of extraction by Question Formation, but leaves the impression that his account could be extended to extraction by Relativization or Topicalization; such an impression is created (i) by omission (after all, the DC and the SSC had been formulated with respect to all extraction rules - in fact, all rules - not just Question Formation), and (ii) by referring, in the context of discussing

the impossibility of a "nonlinguistic antecedent" for definite NPs like the italicized one in (1b), to "another class of specifiers which prohibit extraction" [italics mine; AG] with no further qualification. Some discussion of the behavior of Relativization and Topicalization with respect to extraction from NP was certainly called for, since earlier writers (e.g., Ross, 1967, section 6.4.1.4.) had pointed to data like those in (11).

(11) a. The man who I showed Jack a picture of ϕ was bald.

b.??The man who I showed Jack that picture of ϕ was bald.

c. *The man who I showed Jack Mary's picture of ϕ was bald.

In general, there are informants for whom sentences like those in (12b) are less immediately acceptable than that in (12a).

(12) a. The man who I bought a portrait of ϕ is sick.

b.??The man who I bought {the / that / a certain} portrait of ϕ is sick.

However, Oehrle's account can have nothing in principle to say about data like those in (11) or (12), since relative wh pronouns - unlike interrogative wh pronouns - unlike interrogative wh pronouns - have generally been regarded as definite (Chomsky, 1964, Baker, 1968). Now, while it is certainly not necessary that data like (11) and (12b) should receive the same account as data like (2) and (9) respectively (the very facts of relativization and question formation are different in that the middle and bottom lines of (12b), for example, can - unlike (9b) and (9c) respectively - be accepted in appropriate contexts, a state of affairs illustrated

in section 2.2), distinctions in acceptability like those in (11) and (12) cannot be simply ignored (as Oehrle did).

In conclusion, while Oehrle correctly exhibited the untenability of the DC, and also took a step in (what I believe to be) the right direction, his own proposal is inadequate and incomplete as it stands.

1.2. The Specified Subject Condition

In the preceding subsection, we have seen that the DC was too strong, and that - for specific choices of N in $\left[\frac{\text{N P NP}_x}{\text{NP}_y}\right]$ - the possibility of identifying the referent of $\underline{\text{NP}}_y$ as a function of that of $\underline{\text{NP}}_x$ from $\underline{\text{NP}}_y$.[4] In this subsection, I propose to accomplish two things. In subsection 1.2.1., I shall show that the SSC is also too strong by showing that - given specific choices of N in $\left[\frac{\text{NP's N P NP}_x}{\text{NP}_y}\right]$ - the identifiability of the referent of $\underline{\text{NP}}_y$ as a function of the referent of NP_x is a sufficient condition for the extractability of $\underline{\text{NP}}_x$ from $\underline{\text{NP}}_y$. In subsection 1.2.2., I shall argue that both the DC and the SCC are too weak by exhibiting DC-and SSC-effects with respect to phenomena which - within the more recent versions of the Extended Standard Theory - cannot in principle be subject to conditions like the DC and the SSC (that is, to the kind of conditions that Chomsky, 1973, proposed in an attempt to reanalyze roughly the data that Ross had analyzed by means of island constraints).

1.2.1. The excessive strength of the SSC

Let us begin by noting that there exist definite NPs with genitive NP determiners whose referents can be identified as a function of what is known about the referents of their prepositional objects. Thus, imagine a collector who owns one separate picture of every Hollywood actress (past or present), and who has shown some of his pictures to a friend; at this point, the friend says (13).

(13) Why didn't you show me your picture of MARILYN MONROE?

Note that the italicized NP is semantically definite (it designates an object which the addressee is expected to be able to identify), and that there is absolutely no need for the referent of that NP to have been mentioned in earlier discourse or be perspicuous in the nonlinguistic environment; rather, its referent is identifiable strictly on the basis of the knowledge (shared by the speaker and the addressee) that the referent of the capitalized NP was a Hollywood actress, and that there is therefore only one picture which represents her and which the addressee owns. I shall now show that NPs in the position of the capitalized one in (13) are extractible both by Question Formation and by Relativization.

Thus, assume that the collector's friend knows that the collector considers his collection private and is unwilling to display it too often or for too long; in this context, the friend asks (14).

(14) How many actresses would you be willing to show me your pictures of Ø?

If we assume in addition that the collector's feeling of privacy is greater with respect to some actresses' pictures than with respect to others, then he can say (15) to his friend.

(15) There is one particular actess who I will never show you my picture of ∅!

A slightly different kind of context within which extraction of NPs in the position of the capitalized one in (13) is permitted is the following: assume that in addition to the first collector (call him Arnold), there is a second collector (call him Bob) who also owns a collection just like Arnold's except that Bob's pictures were taken before the represented individuals became actresses while Arnold's pictures were taken after that time. Now, Arnold tells his friend:

(16) Which actesses would you like to see my pictures of ∅, and which would you like to see Bob's pictures of ∅?

If we now further assume that there is some particular actress about whom either Arnold or Bob feels very strongly, then Arnold can say either (17a) or (17b) (depending on whose feelings Arnold believes to be stronger).

(17) a. I can't speak for Bob, but there is at least one actress who you will never see my picture of ∅!

b. I personally don't care too much, but there is at least one actress who you will never see Bob's picture of ∅!

1.2.2. DC/SSC effects with respect to condition-insensitive phenomena

In this subsection, I propose to show that DC/SSC effects entirely parallel to those that we found with respect to extraction by Relativization and Question-Formation are also found with respect to phenomena that the DC and SSC are not applicable to. To be sure, the DC and SSC - as well as a number of additional conditions - were stated in Chomsky (1973) as applicable to all (transformational and semantic) rules (see (1)). However, since this formulation had the undesirable effect of representing discourse-anaphoric processes (such as definite referential pronominalization and VP-Deletion) as subject to the same constraints as unbounded movement rules (a position amply shown to be incorrect in Ross, 1967), Chomsky divided his model of linguistic description into condition-sensitive and condition-insensitive phenomena in later works. Thus, in Chomsky (1975), a grammar is divided into ordered components as follows: syntactic transformations followed by sentence-bound semantic rules form "sentence-grammar"; sentence-grammar is in turn followed by "discourse-grammar" (a set of semantic rules that operate over discourses and which interact with context of situation and assumed background belief to yield full representations of meaning). In (Chomsky (1976), a further division was recognized in the sentence-bound semantic component: certain semantic rules (called rules of "construal") were said to form the "core-grammar" together with syntactic transformations (among the rules of construal, Chomsky cites the reflexive and reciprocal rules, and the rules which

interpret the phonologically null "traces" left by movement operations). Now, the conditions discussed in Chomsky (1973) were restricted to sentence-grammar in Chomsky (1975), as to core-grammar in Chomsky (1976)

Assuming condition-sensitivity for the core-grammar only (as proposed in Chomsky, 1976), we shall now see that DC/SSC effects are found with rules that do not belong in it. In particular, we shall see that there are rules external to the core-grammar which, in order to "affect" NP_x in $[\underset{NP}{DET\ N\ P\ NP_x}]$, require that NP_y be construable as a function of NP_x (i) when DET is a genitive NP (as we found with respect to both Relativization and Question - Formation) and/or (ii) when DET is the (as we found with respect to Question - Formation). Actually, since we saw in section 1.1. that DC effects are not limited to NPs initiated by the, but are also found with respect to NPs initiated by demonstratives or (a) certain, I shall demonstrate interrogative-like DC effects in what follows only in terms of NPs with demonstratives and (a) certain, because such NPs can never be construed as functions of a questioned extractee (for example, (9b) and (9c) cannot - unlike (9a) - be accepted in some context); the demonstration that interrogative-like DC effects are also found with respect to NPs initiated by the will be left as an exercise to the reader.

The first type of phenomenon which shows DC/SSC effects but which Chomsky (1976) proposed to regard as condition-insensitive is the rule which places the wh feature on relative and interrogative

pronouns (with presumably the heads of relatives and some (abstract) interrogative operator respectively acting as "triggers" for the placement of that feature. There are (at least) two kinds of situation where a wh-marked pronoun does not, or need not, undergo movement out of containing NPs, namely, (i) when the containing NP can move along with the wh pronoun, and (ii) when the wh pronoun is one of several interrogative pronouns "bound" by the same interrogative operator. Chomsky regarded wh Placement as condition insensitive on the grounds that, to the extent that the condition sensitivity of this rule can be verified (and it cannot always be), there are NP-positions which allow wh Placement but not wh Movement; two illustrations are provided in (18) and (19), where the positions under consideration are indicated by X in the (a) sentences, the impossibility of extraction is shown in the (b) sentences, and the acceptability of wh placement with and without "dragging" is demonstrated in the (c) and (d) sentences respectively.

(18) a. I saw X's book.

b. *Whose did you see Ø book?

c. Whose book did you see Ø?

d. Who saw whose book?

(19) a. I explained to X why lions hunt gazelles.

b. *Who did you explain to Ø why lions hunt gazelles?

c. To whom did you explain Ø why lions hunt gazelles?

d. Who explained to whom why lions hunt gazelles?

Now, to see that wh placement exhibits DC/SSC effects, note first that relativization by "dragging" behaves just like relativization by extraction. Thus, (20) does not seem to be better than (11c) (in "out-of-the-blue" situations), while (21) seems to have essentially the acceptability of (17a) (in the context that was assumed for the latter; in the remainder of this section, I will use the symbol "%" to indicate a sentence which is usually unacceptable out of context, but which is acceptable in some context that has been provided.

(20) *The man Mary's picture of whom I showed to Jack was bald.

(21) %There is no one particular actress my picture of whom you are never going to see!

Concerning question formation with no reordering, note that the effects that were found with respect to question formation by extraction are also found in (22); (22d) is appropriate, for example, when asked by a collector of pictures of actresses who jealously keeps his collection to himself, who has just seen someone disappearing from his apartment, and who has reason to suspect that the intruder has had time to glance at just one picture.

(22) a. Who saw a picture of which actress?

b. *Who saw a certain picture of which actress?

c. *Who saw that picture of which actress?

d. %Who can have seen my picture of which actress?

A second type of phenomenon which shows interrogative-like DC/SSC effects, but which is not - according to Chomsky (1976) - condition sensitive, is found in comparative constructions. Comparative constructions like (23)

(23) John has $\left\{\begin{matrix}\text{as many}\\\text{more}\end{matrix}\right\}$ pencils $\left\{\begin{matrix}\text{as}\\\text{than}\end{matrix}\right\}$ Mary has.

are analyzed in Chomsky (1976) as represented (at some abstract level) as in (24).

(24) John has $\left\{\begin{matrix}\text{as many}\\\text{more}\end{matrix}\right\}$ pencils $\left\{\begin{matrix}\text{as}\\\text{than}\end{matrix}\right\}$ Mary has [$\underset{\text{NP}}{[\underline{\text{wh}}+\text{X}]}$ many pencils]

(23) is derived from (24) by means of wh Movement, which ultimately positions QP (together with the remaining material of the containing material of the containing NP, namely, many pencils) immediately to the right of as or than, after which various deletion operations eliminate both QP and the material that has been dragged along with it; crucially, wh is claimed to be condition-sensitive, while the various subsequent deletions are claimed to be condition-insensitive. With this background in mind, consider (25).

(25) John has seen pictures of as many actresses
as Bob has seen oil-paintings of Ø.

Since wh-Movement has operated out of the rightmost italicized NP, we can in principle expect to find condition-sensitivity in relation to that NP. At the same time, there are no grounds for expecting any condition-sensitivity with respect to the leftmost italicized NP, since the only rules in which elements of that NP are involved

are all condition-insensitive deletions: furthermore, all of Chomsky's conditions are, just like the SSC, defined for situations where X is superior to Y, and, in the deletion process where many actresses of the leftmost italicized NP of (25) has operated as deletion controller, X (i.e., the element "external" to some cyclic node α, in this case, the deletee, which is external to the leftmost italicized NP) is inferior to Y (the deletion controller). Nonetheless, both of the italicized NPs in structure like (25) exhibit DC/SSC effects, as illustrated below.

(26) John has seen (*these) pictures of more actresses than Bob has seen (*those) oil-paintings of Ø.

(27) John has seen (*certain) pictures of more actresses than Bob has seen (*certain) oil-paintings of Ø.

(28) John has seen (%Mary's) pictures of more actresses than Bob has seen (%Jackie's) oil-paintings of Ø.

An appropriate context for (28) with the parenthesized material would be one in which, for some well defined set of actresses, Mary has a picture of each and Jackie has an oil-painting of each. A sentence parallel to (28) in the relevant respects and for which a perhaps more "natural" context can be provided is (29), which may be imagined spoken by some Israeli official after Cyrus Vance's first visit to the Middle East, if it is assumed that Vance had put forward a separate solution to each of the (important) problems of the area.

(29) % Our government has examined Vance's solutions to as many of our problems as it is ever likely to examine anybody else's (solutions to) Ø.

A third and last class of phenomena which exhibit interrogative-like DC/SSC effects and which Chomsky (1976) explicitly claims are condition insensitive consists of rules which "associate" negation, as well as various operators and quantifiers with negative import, with such items as any and ever (obligatorily) and many (optionally, yielding the reading "few"). Rules of this nature, and in particular the one which associates negative elements with any and ever, were claimed in Ross (1967) to be subject to the general constraints on extraction rules, but Chomsky (1976) pointed out that there is at least one type of constituent (namely, relative clauses) which is typically resistant to extraction, but not to rules of association with negation, as illustrated in (30) (in this and ensuing examples, elements with negative import are capitalized, and elements that associate with them are italicized).

(30) a. *What kind of cars do you like people who own Ø?

b. We caN'T find books that have any missing pages!

Chomsky's contention that rules of association with negation are not in general subject to constraints on extraction appears correct to me in view of the fact that the contrast in (30) is not an isolated one. Thus, there are at least four additional constituent-types which typically constrain extraction (namely, noun complement clauses,

sentential subjects, tensed adverbial clauses, and pseudoclefted clauses), but which do not constrain association with negation, as illustrated in (31)-(34) respectively.

(31) a. *Who did you mention the fact that I wanted to meet Ø?

b. I am APPALLED at the fact that you ever even considered doing business with those gangsters.

(32) a. *Which proposal do you believe that for John to accept Ø is a strong possibility?

b. I do NOT believe that for John to ever accept any of your offers is a very strong possibility.

(33) a. *Who did John cry because he couldn't meet Ø?

b. John didN'T go to prison because he had ever robbed any banks, but because he was a bigamist.

(34) a. *Who did you claim that what John thinks is that Mary once hit Ø?

b. What Mary caN'T believe is that Bob has ever robbed anyone.

c. I do NOT think that what everybody fears is that Mary has ever robbed anyone; rather, what people fear is that she may be a secret terrorist.

Observe now that the rule which relates the capitalized elements in (30)-(34) to the corresponding italicized ones displays the same DC/SSC effects as interrogative and comparative constructions:

(35) a. I haveN'T found pictures of anybody.

b. *I haveN'T found certain pictures of anybody.

c. *I haveN'T found those pictures of anybody.

d. %Our government hasN'T yet examined Vance's solutions to any of our important problems.

A context appropriate for (35d) is essentially the one that was assumed for (29) (the same context may also be assumed for (37d) and (38d) below).

Another phenomenon closely related to the one just discussed is the rule that associates the capitalized negative in (36) with the italicized element, yielding a reading essentially synonymous with "I have seen (relatively) few girls" or "there aren't (too) many girls that I have seen".

(36) I haveN'T seen (too) many girls.

This rule of association with negation was also claimed in Chomsky (1976) to be condition-insensitive (note the possibility of constructing examples parallel to the (b) sentences in (30)-(34), an enterprise which is left as an exercise to the reader), and - just like the rule illustrated in (35) - it exhibits DC/SSC effects, as shown in (37) (acceptability markings are given strictly with respect to the intended "associated" reading).

(37) a. I haveN'T bought pictures of (too) many actresses.

b. *I haveN'T bought certain pictures of (too) many actresses.

c. *I haveN'T bought those pictures of (too) many actresses.

d. %Our government hasN'T yet examined Vance's solutions to (too) many of our important problems.

Finally, note that when the negative element, rather than the one which associates with it, is with a "complex" NP, the familiar DC/SSC effects are again displayed, as illustrated in (38).

(38) a. Pictures of (only) FEW of these actresses will ever be shown to anyone.[5]

b. *Certain pictures of (only) FEW of these actresses will ever be shown to anyone.

c. *These pictures of (only) FEW of those actresses will ever be shown to anyone.

d. %Vance's solutions to (only) FEW of our (crucial) problems will ever be revealed to any outsiders.

In sum, I hope to have shown in section 1.2. (i) that the SSC is empirically inadequate with respect to extraction out of NP, and (ii) that the (apparent) DC/SSC effects exhibited by extraction rules are also found with phenomena that otherwise behave quite differently from extraction.

2. An Alternative Proposal

The facts discussed in the preceding sections have raised at least the following questions:

With respect to NPs of the general form $\left[\underline{\text{DET N P NP}}_{\underline{\text{NP}}_y}\right]_x$

(i) why is it that $\underline{\text{NP}}_x$ cannot be questioned, compared, or "involved" in association with negation when DET is either a demonstrative or an indefinite article followed by certain?

(ii) why can NP not be questioned, compared, or "involved" in association with negation when DET is the or a definite genitive NP unless the referent of NP_y is indentifiable as a function of the referent of NP_x?

(iii) while NP_x can in general be relativized, why are special contexts sometimes needed, particularly when DET is a definite genitive NP?

It is to these questions (as well as to a few others) that I now turn.

2.1. Some self-contradictory constructions

An important factor in the understanding of the behavior of NP_x under questioning, comparison, and association with negation is that, under the circumstances just stated, NP_x is not just an indefinite but also a nonspecific indefinite; that is to say, it designates an entity (or a number of entities) which the speaker need not be able to identify (by a description independent of the one provided by the sentence in which the nonspecific NP occurs). In contrast, the use of a specific indefinite NP implies (conversationally implicates) that the speaker is able to identify its referent, even though he does not necessarily assume that the addressee is also capable of performing such an identification, (as he does assume when he uses a definite specific NP). The claim that NP_x is nonspecific when questioned or involved in association with negation can be supported by using a test suggested in Lasnik (1972, chapter 2), and which is based on the principle that a nonspecific NP cannot be followed by a specification of its referent(s); data supporting my claim with respect to NP_x under the circumstances at issue are provided in (39).[6]

(39) a. Which people (*namely, John, Bob, and Mary) were present at the party?

b. Bob doesn't like anybody (*namely, Jill and Kate).

c. Mary hasn't met too many people (*namely, George, Jackie, Bob, and Jill) [the enumeration is marked deviant strictly with respect to the reading where *many* is associated with negation]

d. Few people (*namely, Mary, Bob, and Jill) had any fun.

A second factor of importance in the present context is that when DET is a demonstrative or an indefinite determiner followed by *certain*, $\underline{NP}_y$ is necessarily specific (that is, the speaker is assumed to be able to identify its referent prior to, and independently of, his uttering of the sentence where $\underline{NP}_y$ occurs). In contrast, when DET is either *the* or a definite genitive NP, $\underline{NP}_y$ may be nonspecific, since it may be identifiable just as a function of $\underline{NP}_x$, which may itself be nonspecific.

Observe now that the head noun of $\underline{NP}_y$ is a *relational* noun; that is to say, $\underline{NP}_y$ designates an entity which bears a certain relation to some other entity (the one designated by $\underline{NP}_x$). Observe furthermore that if the referent of some NP exists in the mental universe of the speaker, it does not follow that some entity bearing a certain relation to that referent must also exist there; that is to say, when $\underline{NP}_x$ may be nonspecific, as illustrated by the acceptability of (40).

(40) I would be willing to buy <u>any portrait of THAT MAN</u>.

In contrast, if an entity designated by means of a relational noun exists in the mental universe of the speaker, then the entity to which the former entity is related is thereby automatically introduced in that universe, too (something cannot, for example, be a portrait without being the portrait of someone); that is to say, if $\underline{NP}_y$ is specific, then $\underline{NP}_x$ must also be specific, as illustrated by the impossibility of (41), which should be contrasted with the acceptability of (40).

(41) *I would be willing to buy <u>that portrait of ANY MAN</u>.

The ill-formedness of (41) is due, I submit to the fact that the capitalized NP is self-contradictory: on the one hand, it needs to be specific, since the portrait which represents it is specific; on the other hand, it needs to be nonspecific, by the lexical properties of <u>any</u> (which are essentially that the referent of the NP it "modifies" has not yet been mentally chosen by the speaker).

My account of the ill-formedness of (41) differs in two respects from the one that Oehrle's account provided for it; thus, I have claimed, unlike Oehrle, (i) that one of the factors responsible for ill-formedness is that the capitalized NP is nonspecific, and not just indefinite, and (ii) that it is the interpretation of the capitalized NP, rather than that of the italicized one, which is self-contradictory. I shall now show that my account avoids two of the difficulties which plagued Oehrle's. First, Oehrle was unable to account for the acceptability of (8) (reproduced

below), which contrasts with the unacceptability of (41).

(8) John showed me the portrait of an Albanian woman$_i$;
that portrait of AN ALBANIAN WOMAN$_i$ was really quite striking.

The reason why my account does not predict unacceptability for (8) is that an Albanian woman need not, unlike any man, necessarily be interpreted as nonspecific; accordingly, the capitalized NP can be interpreted as specific, as in fact it must, both because of the import of that and because its referent was mentioned in prior discourse (in the portion of (8) which precedes the semicolon). The second difficulty which Oehrle faced was that he could not account for the ill-formedness of (9b) (when there was no previous discourse mention of the referent of the italicized NP) and for that of (9c).

(9) b. *Who did you buy that picture of Ø?

c. *Who did you buy a certain picture of Ø?

My account, however, can, since - while the italicized NP in (9b) need not be discourse-anaphoric and the one in (9c) cannot be discourse-anaphoric - both NPs are necessarily specific (the former, because, on nonanphoric interpretations, it implies that the speaker believes in the existence of its referent in the nonlinguistic environment, and the latter, because it implies that its referent already exists in the mental universe of the speaker; in short, my account succeeds where Oehrle's fails because it is constructed in terms of the notion "specificity," which properly includes "referential

discourse-anaphoricity."

2.2. The role of context with respect to definite NPs

In section 1.1., I pointed out that Oehrle's account was incomplete in that it failed to allow for the fact that (2b) has one well-formed interpretation. We can nonetheless ask why (2b) requires contextual help in order to be accepted (at least for some informants) while sentences like (42) do not.

(42) Which car did you clean the inside of Ø?

The answer to this question needs to be provided, I believe, in terms of the extralinguistic knowledge that language users "normally" have. Thus, since a car can have only one "inside," the referent of the inside of the car is automatically identifiable given the referent of the car (in fact, it would not even make sense to attempt to identify the former expression by prior context, since this would imply that the car could have more than one inside; notice the nonsensicalness of *that inside of the car). Unlike the inside of the car, the referents of expressions like the palace of the king or the proof of the theorem are not automatically identifiable given the referent of the object of the preposition of; nonetheless, the sentences in (43) seem to be accepted by informants without contextual help.

(43) a. Which king were you just invited to the palace of Ø?

b. Which theorem did you present the proof of Ø?

The reason for this is, I suggest, that informants find it easy to supply the missing contextual cues in terms of cultural and experiential assumptions, thus, while a king may have more than one palace, it may be customary for him to invite his guests to just one of them (say, the one in the capital city), and while there may be more than one proof for a theorem, it is quite common for one of them to be considered standard and taught in the schools to the exclusion of others. In contrast, it may not be so obvious that given a person, his portrait is identifiable, and it is for that reason, I suspect, that most informants need contextual help with (2b).

In section 1.1., it was also pointed out that Oehrle's account was incomplete in having failed to address itself to contrasts in acceptability like that in (12).

(12) a. The man who I bought a portrait of Ø is sick.

b.??The man who I bought {the / that / a certain} portrait of Ø is sick.

Some speakers also report similar contrasts with respect to sentences like those in (44), which resemble those in (12) in that the extractee is definite.

(44) a. Marilyn Monroe (,) I have decided to buy a portrait of Ø.

b. ?Marilyn Monroe (,) I have decided to buy that portrait of Ø.

However, as pointed out in section 1.1., the (b) sentences in (12) and (44) become acceptable in appropriate contexts. Thus

the top and middle lines of (12b) are acceptable if it is assumed (i) that the speaker has bought more than one portrait each representing some man and (ii) that the speaker considers that the addressee does not have enough information to identify a particular man, but does have enough information to identify the portrait which represents him; that is, the portrait of some individual is used to identify the individual. The conditions for the acceptability of the bottom line in (12b) are similar, except that the speaker merely hopes, rather than assumes, that the addressee will succeed in identifying the portrait of the individual that the speaker has in mind. With respect to (44b), it is entirely acceptable if it is assumed that the speaker has been pondering over whether or not to buy a particularly expensive portrait of Marylin Monroe (for greater naturalness, add finally before decided). Note that under the circumstances just described for the (b) sentences in (12) and (44), using the corresponding (a) sentences would be inappropriate.

The contrasts between the (a) and (b) sentences in (12) and (44) in out-of-the-blue situations are, again, due to considerations of "normal" assumptions on the part of language users. Note that fewer assumptions are required in order to make sense of the (a) sentences than are required for the (b) sentences. For example, with respect to (44a), all that one needs to know is the import of the various words and syntactic structures, and who Marylin Monroe was; with respect to (44b), however, it is also necessary to imagine some background scenario like the one I have provided.

I shall discuss one additional kind of example which improves strikingly in acceptability when provided with appropriate contexts. Thus, consider (45), which most informants reject out-of-the-blue.

(45) *John (,) Phineas knows that girl behind Ø.

Ross (1967, section 4.1.2.) accounts for the unacceptability of such sentences in terms of a syntactic restriction (his Complex NP Constraint). It seems, however, that (45) is unacceptable primarily (or entirely) for pragmatic reasons; that is, it is not easy to see when one would want to state, taking John as a "starting point" (or topic, as it is called by workers in Functional Sentence Perspective (FSP)), that someone knows a girl who just happens to be physically located behind him (in other words, it is hard to see why this accidental spatial relationship is significant enough to merit mention of the girl in a statement about John). However, sentences like (45) can be salvaged by appropriate contextual assumptions. Thus, assuming some particular security service agent who constantly shadows the president, it seems quite all right to say (46b) (contrast it with (45)); note that in the context just provided it would be unnatural to say (46a) (the considerations are analogous to those offered above in relation to the preference of (44b) over (44a) in specific contexts).

(46) a. Our president (,) I can't stand a man behind Ø.

b. Our president (,) I can't stand that man behind Ø.

Of course, (45) can be salvaged by assuming a context alanogous to the one I have proposed for (46b) and a "supporter" reading for behind (rather than a purely spatial reading). The fact that speakers tend to reject (45) out-of-the-blue is probably due to the fact that, without special assumptions, one tends to think of the "basic" meaning of words first.[7]

2.3. The role of context with respect to multi-argument NPs

We have so far discussed the importance of context with respect to "complex NP's" that contained only one argument; that is, NPs of the form a/the/that picture of X, where the relational noun picture functions as a predicate and X as its argument. We shall now see that context is also important (in fact, even more so) with respect to the class of relational nouns with two (or more) arguments, a class which includes nouns with genitive NP arguments in determiner position as a special case.

Thus, earlier in this section, we saw that NPs of the form Mary's picture of X need to be construable as a function of X, when X is nonspecific, on pain of self-contradiction. However, this manner of construing complex NPs of the form under consideration is needed even in cases where no self-contradiction would otherwise result. For example, self-contradiction cannot be invoked with respect to (11c) or (20), which as we saw in preceding sections - also tend to be rejected in out-of-the-blue situations.

(11) c. *The man who I showed Jack Mary's picture of Ø was bald.

(20) *The man Mary's picture of whom I showed to Jack was bald.

Neither can self-contradiction be invoked with respect to the contrasts in (47) and (48) (in out-of-the-blue situations), since the italicized NPs in the (b) and (c) sentences may be construed as nonspecific.

(47) a. Who found a book about whom?

b. *Who found a letter to Mary about whom?

c. *Who found a letter to whom about Mary?

(48) a. Books about (only) FEW of these actresses will ever reach the market.

b. *Letters to Mary about (only) FEW of these actresses will ever reach the market.

c. *Letters to (only) FEW of these actresses about Mary will ever reach the market.

Finally, self-contradiction can certainly not be invoked with respect to the contrasts in (49) (out-of-the-blue); these data are parallel to those in (47) and (48), except that the "affected" (in this case, relativized) element is definite and specific.

(49) a. This is the man a letter concerning whom has just been written.

b. *This is the man a letter to Mary concerning whom has just been written.

c. *This is the man a letter to whom concerning Mary has just been written.

That sentences like (11c) and (20) can be accepted in appropriate contexts has already been shown in section 1.2. I shall now show that sentences like the asterisked ones in (47)-(49) can also be accepted with the help of special contexts (and/or lexical modifications that do not affect structure). For example, if it is customary to petition the president of some republic for clemency with regard to condemned men, a representative from the president's office could tell a lawyer who has been making inquiries in relation to his efforts on account of some condemned client (50).

(50) There is a convict a petition to the president {concerning / on behalf of} whom has just been received.

Furthermore, assuming some journalist has found, by breaking into the president's office, a petition on account of some condemned man which had simply ignored (rather than acted upon), some other journalist who has just heard the news could ask a colleague (51).

(51) Who found a petition to the president {concerning / on behalf of} which condemned man?

Finally, an official from the president's office could confide in a friend by saying (52).

(52) Petitions to the president on account of pitifully FEW convicts are ever favorably acted upon.

Note that the sentences in (50)-(52) are structurally parallel to the unacceptable (49b), (47b), and (48b) respectively[8].

To understand the need for contextual help in cases like (11), (20), and the (b) cases of (47)-(49), it is necessary to introduce

some additional notions. Thus, workers in FSP have often pointed out that numerous constructions exhibit a "topic/comment" structure, that is, a division between a variable which is chosen independently of the remainder of the construction and a variable which is chosen as a function of the former; for example, in the discourse in (53),

(53) --What happened to John?

-- HE was run over by a train.

the capitalized element is chosen independently of its sentence (it is in fact, determined by the preceding context) while the italicized string is chosen as a function of the capitalized one. Furthermore, it has been noted that certain constructions exhibit a necessary topic/comment structure; such constructions are relative clauses, and sentences with constituents fronted by Topicalization, where the relativized and topicalized phrases respectively function as topics of their constructions (Kuno, 1976). In addition, there are constructions where a necessary topic/comment structure exists at a level other than that of assertion or denial; for example, Kuno (1976) notes that interrogative constructions involve a presupposed topic/comment structure, where the topic is some variable substitutable for the interrogative pronoun (e.g., what did John see? presupposes for some x, John saw x). Topic/comment structures at the presupposition level are also found in comparative constructions; thus, John is taller than Mary presupposes for some degree x, John is x tall and for some degree y, Mary is y tall and asserts

that x is greater than y. Finally, it seems that the association with negation phenomena that were brought up in section 1.2. also involve a topic/comment structure at some level of representation; thus, the sentences in (54) seem to have the import of those in (55), where the various x's function as topics of the containing bracketed structures.

(54) a. I doN'T like anybody.

b. I haveN'T seen many people ("associated" reading).

c. FEW People had any fun.

(55) a. It is not the case that there is some person x [such that I like x].

b. It is not the case that the number x [such that I have seen x many people] is great.

c. The number x [such that x many people had any fun] is not great.

In short, in all the phenomena that we considered in section 1. which were seen to exhibit DC/SSC effects, the "affected" element functions as a topic at some level of representation.

In addition to the above, it has also been noted that certain constructions (both Ss and NPs) have "natural" or "preferred" topic/comment structures, that is, structures which they tend to assume in out-of-the-blue situations (Keenan, 1974). In particular, the topic role is usually assigned to some argument, rather than to the predicate verb or noun, and - in sentences - the subject generally tends to be selected as topic; furthermore, as NPs are

internally parallel to sentences in certain respects (compare, for example, John painted Mary and John's painting of Mary, or John solved the problem and John's solution to the problem), a genitive NP determiner position tends to be perceived as a topic.

Now, note that when an item X of a complex NP is selected as the necessary topic of some sentence which contains that complex NP (a situation which arises when X is relativized, topicalized, etc.), the remainder of the complex NP is part of the comment on X; we would therefore expect the result to be felicitous to the extent that X can also be selected as the topic of the complex NP, for otherwise the functional perspectives of that complex NP (namely, the one that it "naturally" tends to assume, and the one which it must have by virtue of relativization, topicalization, etc.) would be in conflict with each other. I shall now argue that the reason why sentences like (11), (20), and the (b) and (c) cases of (47)-(49) tend to be rejected in out-of-the-blue situations is that conflicting functional perspectives tend to arise.

Consider first the kind of contrast which informants normally report with respect to sentences like those in (56).

(56) a. The man a picture of WHOM I just showed you is bald.

b. *The man Mary's picture of WHOM I just showed you is bald.

In (56a), the capitalized NP is the only argument of picture; accordingly, it is normally selectable as the topic of the italicized construction, which is consistent with its choice as topic for the

relative clause that contains it. In (56b) on the other hand, the capitalized NP is not normally perceived as the topic of the italicized construction; rather, as noted above, this role tends to be assigned to the genitive NP. But this tendency is in conflict with the selection of the capitalized constituent as topic of a construction (the relative clause) which includes the italicized NP as a (proper) subpart; hence, the difficulty of achieving a coherent functional perspective of (56b), and the resulting unacceptability. It should be noted that the assumption that Mary normally tends to be perceived as topic of the italicized NP in (56b) is independently supported by the observation that (57) is, unlike (56b), quite acceptable without contextual help (for independent supporting arguments, see Keenan, 1974; see also Keenan & Comrie, 1977).

(57) The man WHOSE picture of Mary I just showed you is bald.

Turning now to the contrast between (49a) and (49b), as well as to that betwen (49b) and (50),

(49) a. This is the man a letter concerning whom has just been written.

b. *This is the man a letter to Mary concerning WHOM has just been written.

(50) There is one convict a petition to the president on behalf of WHOM has just been received.

we note first that the italicized NP in (49a) has only one argument, so that there are no problems with topic selection (for reasons analogous to those presented with respect to the acceptability of

(56a)). In (49b), however, there is no natural expectation that the capitalized NP should be the topic of the italicized NP; that is, one does not normally, in conceptualizing a letter to Mary concerning Bob, apply the predicate letter to Mary concerning to Bob, since the former is hardly a "natural predicate" (one does not usually assume that given some randomly chosen man, there should exist a letter to Mary about him; rather, one tends to think of the entity designated by a letter to Mary concerning Bob as a function of two independently chosen entities. namely the referents of Mary and Bob, and, given an analogous functional perspective for the italicized NP in (49b), the perception to Mary as independently chosen conflicts with the requirement (imposed by relativization) that it be chosen as a function of the capitalized constituent. In contrast, in (50), it seems easier to regard the capitlized NP as the topic of the italicized one because petition to the president on behalf of seems to be (particularly within the context provided) a more natural predicate than letter to Mary concerning (without contextual support).[9]

In concluding this discussion of the need for contextual help when "topic forming" operations are applied to some argument of a multi-argument NP, I wish to stress two points. First, the preceding discussion has provided a way of predicting the fact that, out of context, (2c) is generally felt to be less acceptable than (2b); thus, while in both cases it is necessary to be able to think of a context (which may not always be obvious) where the identification

of the referent of the italicized NP can be made strictly as a function of the referent of the corresponding extractee, in (2c) it is also necessary to override the tendency to regard Mary as the "natural" topic of the italicized NP and the difficulty of perceiving Mary's picture of as a "natural" predicate. The second point that I wish to make is that the data in (47)-(49) suggest that the SSC is too weak in a manner other than that demonstrated in section 1.2.2. Thus, the SSC blames the contrast between (2a) and (2c) on the fact that portrait has a subject-argument in addition to the one that has undergone extraction; but similar contrasts are also found between the (a) and (b) of (58) and (59) (at least out of context), even though the capitalized NPs in the (b) sentences are not subjects (at least, not within Chomsky's theory).

(58) a. Which man were you looking for a letter to Ø?

b. *Which man were you looking for a letter to Ø ABOUT MARY?

(59) a. Which man did you find a letter about Ø?

b. *Which man were you looking for a letter to Mary about Ø?

To the extent that the contrast between (2a) and (2c) and the contrasts in (58)-(59) can be subsumed under a single generalization (namely, that in NPs with more than one argument, no argument except the one in determiner position can be "naturally" construed as the topic of the containing NP), the SSC is certainly too weak.

2.4. Summary

In section 2. I have proposed that certain constructions (namely, specific NPs with nonspecific arguments) are self-contradictory; my account improves on an earlier account by Oehrle which also utilizes the notion "self-contradictory" in that, unlike the latter, (i) it correctly fails to predict that all definite-anaphoric NPs with indefinite arguments are ill-formed, and (ii) it correctly predicts that deictic and definite NPs with no linguistic antecedents, as well as indefinite, specific NPs, may not have nonspecific arguments. I have also attempted to demonstrate the significance of contextual (experiential, cultural, etc.) assumptions in the determination of the acceptability of constructions which are not contradictory in their specific/nonspecific properties (in particular, of NPs with more than one argument one of which is designated as a necessary topic), and have proposed that some of the constructions under consideration may invite conflicting functional perspectives in the absence of explicitly provided contexts.

3. The Status of the Specified Subject Condition within the Revised Extended Standard Theory

I have argued in the preceding sections that the SSC is both unnecessary and insufficient with respect to extraction out of NP, and that the data it was intended to account for, as well as certain further facts, are adequately accounted for by the view that certain

construction types are (on some or all of their readings) self-contradictory either in terms of specific/nonspecific properties or in terms of topic/comment assignments. The SSC was not, however, devised to deal only with extraction out of NP, but also with the behaviour of such "bounded" movement rules as Passive and Raising (reanalyzed in Chomsky, 1975, as instances or a rule of NP Movement), as well as with that of rules of "construal" (such as the reflexive and reciprocal rules). Since I have not proposed that the SSC is inadequate with respect to rules of the types just mentioned, we may ask what consequences, if any, the results of this paper have with respect to the status of the SSC within the Revised Extended Standard Theory (assuming that the SSC is adequate with respect to those rules).

As noted in the Introduction, a number of writers (in particular, Postal, 1974, 1976, and Bach & Horn, 1976) have argued against the retention of the SSC (as stated in Chomsky, 1973) in linguistic theory, on both empirical and theoretical grounds. Chomsky (1976) offered a reply to such criticism based on two main strategies: first, he restricted the SSC (together with other conditions) to the rules of the core grammar, more exactly, to the rules of construal within core grammar, constraints on movement rules (with the exception of the "Subjacency Condition") being superseded by constraints on rules for the interpretation of the traces left by such rules), a move which rendered irrelevant many of Postal's and Bach & Horn's counterexamples; and, second, he adopted firmly

a position which he had considered only as a possibility in Chomsky (1973), namely, that conditions on core-grammars do not express absolute prohibitions, but merely relative ones, which can be overruled by specifically complicating the statement of individual rules. We may therefore ask (i) whether the strategies just mentioned can make existence of acceptable data like (14)-(17) consistent with the retention of the SSC as a condition on the rules of construal within core grammars, and (ii) in the event that the answer to the preceding question is no, what consequences, if any, follow with respect to the status of the SSC within the Revised Extended Standard Theory.

With respect to the first of the questions just asked, I believe that the answer is no. Thus, the first of Chomsky's strategies mentioned in the preceding paragraph is clearly irrelevant, since the rules for the interpretation of traces left by the movement rules which have operated in (14)-(17) are specifically assigned by Chomsky to the core grammar. As for the second strategy, it cannot save the SSC from such counterexamples as (14)-(17), unless the Revised Extended Standard Theory is augmented with "forward-looking" derivational constraints, clearly an undesirable move, and in any event one which Chomsky does not allow for. To see that this is so, consider how the rule for interpreting the traces left by wh Movement would have to be complicated to allow the "suspensions" of the SSC. What is needed is a mention, in the structural description of that rule, of the optional presence of some NP_i between the surface position of the NP_j reordered by wh Movement and its trace t_j, with the specification

that if NP_i is the subject of some NP_k which properly includes t_j, then NP_j just be construable as the topic of NP_k. Now, we have seen in earlier sections that topic/comment assignments can often be determined only in terms of context, situation, and assumed background belief; but this means that such assignments cannot be carried out within the core grammar, since Chomsky (1975) explicitly states that only conditions on the rules of discourse-grammar (which, as noted in section 1.2. does not overlap with core grammar) "may involve properties of discourse, situation, and assumed background belief." In addition, it is explicitly stated in Chomsky (1976) that rules of topic/comment assignment (in his terminology, "rules of prediction") fall completely outside the framework of core grammar. Since the determination of topic/comment properties is necessarily made <u>after</u> the rule which interprets traces left by <u>wh</u> Movement, it follows that this rule can refer to those properties (in order to suspend the SSC) only if it is endowed with the power of forward-looking derivational constraints.

With respect to the second question asked above in relation to the status of the SSC, we may note that, unless the Revised Extended Standard Theory is augmented with forward-looking derivational constraints, it is necessary to specify that the SSC constraints all rules of construal, including those which interpret the traces left by NP Movement, except for the rules which interpret the traces left by <u>wh</u> Movement. This move, while not

technically impossible, is certainly highly unnatural, since the class of rules (of contrual) of the core-grammar minus (the rule that construes the traces of) Wh-Movement has no independent justification within the (Revised) Extended Standard Theory. That is to say, within the framework of, say, Postal (1974) - where both bounded and unbounded phenomena are assumed - the class in question could be characterized as the class of bounded rules within (the semantic component of) the core-grammar; within the (Revised) Extended Standard Theory, however, such a move is not possible, since Chomsky (1973, 1975, 1976) explicitly denies the existence of unbounded rules.

In conclusion, the SSC can be maintained within existing versions of the (Revised) Extended Standard Theory only at the cost of either (i) trivializing the theory through the incorporation of forward - looking derivational constraints, or (ii) providing an unnatural characterization of what might in principle constitute a natural class. The minimal conclusions that follow for proponents of the (Revised) Extended Standard Theory are - as far as I see - that either the notion "core-grammar", or the view that all rules are bounded, or the SSC, bears reconsideration.

APPENDIX

As pointed out in the body of this paper, certain modifications to the theoretical framework put forward in Chomsky (1973)

were proposed in Chomsky (1976), to a large extent as a reaction to the criticism of, and counterproposals to, the former work offered in Bach & Horn (1976); in particular, Chomsky proposed a somewhat different analysis of the contrasts found in (2). I shall argue in this Appendix that this more recent analysis not only does not avoid the difficulties encountered by the earlier one, but actually faces some additional ones.

Bach & Horn proposed that the SSC (together with two other conditions proposed in Chomsky, 1973) be eliminated in favor of the constraint in (60), which - they argued - not only allows a simplification of the theoretical framework, but also makes better empirical predictions.

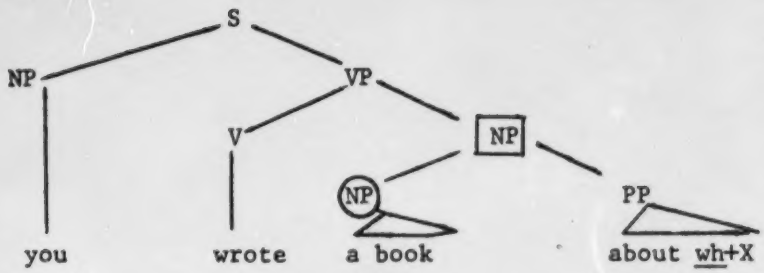
(60) The NP Constraint (NPC)

No constituent that is dominated by NP can be moved or deleted from that NP by a transformational rule.

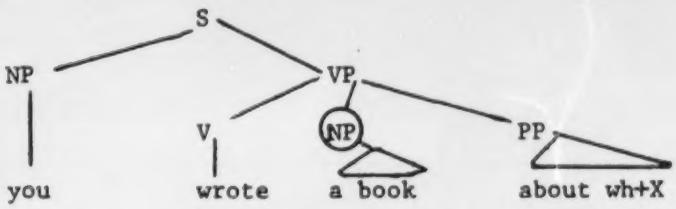
A number of prima facie counterexamples to the NPC were handled in Bach & Horn through the reanalysis of the structures to which movement or deletion rules are assumed to apply; in particular, they offered arguments (which will not be repeated here) that (61) is acceptable because its structure prior to extraction need not be (62), but may in fact be (63), so that wh Movement need not violate the NPC.

(61) Who did you write a book about Ø?

(62)



(63)



While acknowledging the strength of Bach & Horn's arguments in favor of the existence of a base structure like (63) for (61), Chomsky nonetheless shows that there exist acceptable sentences like (64), to which Bach & Horn's various operational tests would assign only base structures like (62), and would therefore fail to predict its acceptability.

(64) Who did you buy a picture of Ø?

Chomsky's reaction to this state of affairs was to retain the SSC within linguistic theory (for reasons having to do with rules of the core grammar other than wh Movement), and to incorporate the NPC as a condition on core grammars as well. To deal with the acceptability of (64), Chomsky proposed that, while its base structure at the point of application of wh Movement is basically (63), by virtue of the application to structures like (62) of a lexically-governed rule of Extraposition-of-PP, whose effect is to "vacuously"

remove the node PP from under the domination of the boxed NP, yielding essentially a structure like (63) (except for the fact that the reordered NP has left a trace behind). To account for the contrast between (64) and (2c), Chomsky proposes that Extraposition-of-PP is itself constrained by the SSC (more, correctly, the SSC constrains the rule for the interpretation of the trace left by the extraposition process, so that (i) if Extraposition-of-PP has applied to the derivation of (2c), the result is bad because this rule has violated the SSC, and (ii) if Extraposition-of-PP has not applied, then the result is bad because wh Movement has violated both the SSC and the NPC. The adequacy of these proposals will now be evaluated.

First, we may ask whether there exists any independent justification for assuming that (apparent) extraction from some NP_i can take place just in those cases where Extraposition-of-PP has applied to NP_i. Chomsky offers the data in (65) in support of this view (specifically, in support of the contention that Extraposition-of-PP is restricted by the SSC).

(65) a. A review of John's book has just arrived.

b. A review has just arrived of John's book.

c. Mary's review of John's has just arrived.

d. *Mary's review has just arrived of John's book.

Note that the support provided by data like (65) with respect to Chomsky's analysis of (64) is more suggestive than firm, since it does not follow that vacuous extraposition from object position

necessarily obeys the same conditions as nonvacuous extraposition from subject position. More seriously, if it is assumed that the two types of processes do obey the same conditions, then it is incorrectly predicted that, since (apparent) wh Movement has been able to apply to (66a) yielding (66b), Extraposition-of-PP should also be able to apply to (67a) to yield (67b).

(66) a. You must admire the beauty of wh+some queen

b. Which queen do you most admire the beauty of Ø?

(67) a. The beauty of the queen is stunning.

b. *The beauty is stunning of the queen.

To avoid incorrect predictions, it is necessary to give up the claim that (65) provides support for the contention that vacuous extraposition from object position obeys the SSC, and to assume the correctness of this contention without independent support.

Suppose that one does just that; has one thereby avoided the difficulties that plagued the analysis of (2c) in Chomsky (1973)? The answer is clearly no, since the analysis of Chomsky (1976) faces exactly the same difficulties as its predecessor with respect to data like (14)-(17), except that it is now the rule for the interpretation of the traces left by Extraposition-of-PP, rather than that for the interpretation of traces left by wh Movement, which requires the use of forward-looking derivational constraints.

In addition to the difficulties of its predecessor, the analysis in Chomsky (1976) faces some difficulties of its own. For one thing,

it predicts that extraction from NP should be impossible whenever Extraposition-of-PP has demonstrably not applied; but this is patently false, as shown by the existence of acceptable sentences like those in (68) (where Extraposition-of-PP cannot have applied, since this rule reorders a PP to the end of the cyclic category that immediately contains the NP which immediately contained that PP, and the capitalized material belongs to the cyclic category that immediately contains the italicized NP); with respect to (68c), assume that it is addressed to someone that the speaker regards as a very poor painter.

(68) a. Chairman Mao (,) there is a portrait of Ø IN YOUR OFFICE

b. Chairman Mao (,) I can't find any portrait of Ø OR ANY BOOK ABOUT Ø.

c. Chairman Mao (,) I will never allow your portrait of Ø IN MY OFFICE!

A further difficulty with Chomsky's analysis is that it provides no explanation for the fact that when Extraposition has demonstrably taken place (as in (69a)), the result of extraction is worse than when it has demonstrably not taken place, as can be seen by comparing (69b) and (68a).

(69) a. There is a portrait IN MY OFFICE of chairman Mao.

b. *Chairman Mao (,) there is a portrait IN MY OFFICE of Ø.

Further, while the badness of (69b) does not show that extraposition cannot have applied in the derivation of (64) (so long as vacuous and nonvacuous extraposition and kept distinct), it certainly reduces the plausibility of the contention that it has). In conclusion, it seems quite clear that the analysis of the facts in (1) offered in Chomsky (1976) does not constitute a viable alternative to the analysis offered in Chomsky (1973).

It is perhaps worth mentioning that Chomsky (1976) suggested - as a possible alternative to relating structures like (63) to structures like (62) by vacuous extraposition - that the relationship in question be established by a rule of "structural readjustment"; the adoption of such an alternative would avoid the difficulties that the extraposition-analysis faced with respect to data like (68), since readjustment rules do not reorder constituents over linguistic material. However, it can be shown that the readjustment-analysis is either untenable or vacuous.

Thus, readjustment rules have been studied in detail by Langendoen (1975), who noted that the only external evidence for the operation of readjustment processes is that, in multiply recursive constructions, a "coordinate-like" intonation is manifested instead of the expected "recursive" intonation. If it is assumed that coordinate-like intonation is an obligatory consequence of Chomsky's readjustment process, then it is falsely predicted that (70) <u>requires</u> a coordinate-like intonation with respect to the italicized string in order to be

accepted, and it is also falsely predicted that (71) (which is certainly unacceptable, at least out of context) improves if the italicized string receives a coordinate-like intonation.

(70) Reports which the government prescribes
the height of the lettering on the covers of ∅
are invariably boring.

(71) *Which subject were you looking for John's copies of
Bill's reviews of Mary's books on ∅?

If it is assumed, on the other hand, that Chomsky's readjustment process does not have intonational, or other observable, consequences, his proposal is of course tenable, but empty.

Notes

*I wish to thank Robert Lees, Susumu Kuno, Edward Keenan, Paul Schachter, Robert Stockwell, Sandra Thompson, Asa Kasher, Tania Rinehart, David Stein, and David Gil for helpful comments on earlier versions of this paper.

[1]For the notion "unbounded rule", see Ross (1967) and Postal (1974, section 2.4.). In what follows, the term 'unbounded extraction rule" is used as a descriptive term which purports to cover such phenomena as Relativization, Question-Formation, and Topicalization, and does not express an a priori commitment on my part that such phenomena must in fact be described by means of unbounded rules. For a view which denies that such phenomena must be so described, see Chomsky (1973, 1975, 1976); see also section 0. and 3. below.

[2]The second reading of painting that Oehrle actually discusses is "a painter's life-time oeuvre." I have used the reading "style(s)" in this paper because (i) this choice in no way affects the point Oehrle wanted to make, and (ii) the informants I have consulted found the "style(s)" reading more natural than the "oeuvre" reading.

[3]A qualification is in order here. Certain question types, such as (i),

(i) Who is in the next room?

are ambiguous between a reading where one is asking for the choice of some referent out of a larger set of potential referents, and a reading where one is asking for some additional information about some referent whose choice is already clear (the latter reading is more perspicuous in who are you?). In sentences like (2a) or (9a), most informants can only get the first of the two readings of who just described, and it is on this reading that (9b,c) are judged impossible. Should there turn out to be informants who can get the second reading of who in (2a) or (9a), then I do not predict that they will reject (9b,c); in fact, to the extent that the reading is possible, I would expect that (9b,c) should be no worse than (ii) or (iii), which - just like the middle and bottom lines of (12b) - can be accepted in appropriate contexts.

(ii) Who was it that you bought that picture of Ø?

(iii) Who was it that you bought a certain picture of Ø?

I am indebted for the observations in this footnote to Asa Kasher.

[4]The qualification "for specific choices of N" appears necessary, in view of the fact that such sentences as (i) and (ii) seem bad, despite the fact that the referents of the italicized NPs are identificable as a function of the corresponding extractees.

(i) * Whose arrival were you most interested in the time of ∅?
(ii) * Which accident were you most interested in the scene of ∅?

[5]Note that one might expect to find (at least) two readings in (38a), given the ambiguity of (i).

(i) Pictures of only few actresses have been hard to market.

On the first reading of (i), which is paraphraseable as "pictures such that each represents few actesses have been hard to market", few is within the scope of the (understood) quantifier of the italicized NP; on the second reading, which is paraphraseable as "there are few actresses whose pictures have been hard to market," the quantifier of the italicized NP is within the scope of few; and few bears a special intonational peak. Incidentally, these two readings have distinct truth conditions; if, for example, there are one hundred actresses within the universe of discourse, and a hundred pictures each representing a different actress, and if moreover ninety-eight pictures have been hard to market, then (i) is true on the first reading but false on the second. - Now, (38a) has only a reading where few has wide scope, presumably because in order for few to be able to include within its scope items within the main clause verb phrase, (in this case, ever and anyone) it must also be able to include within its scope the subject NP of which it is a proper subpart.

[6]Lasnik's test is - like all syntactic tests that purport semantic points - suggestive, rather than demonstrative. In particular, it does not provide a necessary condition for presupposed nonspecificity, and it fails with respect to compared NPs, as shown in (i).

(i) John has as many friends (namely, Bob, Bill, and Bessie) as Mary has enemeis (namely, Jack, Jill and Jo.).

Note that (i) (without the parenthesized material) presupposes John has x many friends and Mary has y many enemies, and asserts that x is equal to y. Since the sentence asserts what the relative cardinalities of x and y are, it is consistent with the implication that the speaker knows their absolute cardinalities as well, and is moreover acquainted with the identities of John's friends and Mary's enemies; hence, the acceptability of the parenthesized material in (i). What matters, however, for our purposes is that the sets consisting of John's friends and Mary's enemies are presuppositionally nonspecific, because their sizes are not presuppositionally known (if they were assumed to be known, what would be the point of asserting their relative magnitudes?) In particular, as proposed in the text, the illformedness of the various italicized NPs in (26) and 27) (with the parenthesized material included) is due to the clash between the presuppositions of specificity and nonspecificity that hold with respect to the various sets of actresses explicitly or implicitly mentioned.

[7]Contrasts similar to the one between (45) and (46b) are pointed out in Bolinger (1972) and Kuno (1976).

[8]Natural acceptable constructions analogous to the (b) sentences in (47)-(49) are somewhat harder to find (see footnote 9), but not impossible. Thus, if it assumed that John's lawyer has been petitioning higher and higher officials without obtaining clemency for his client, that lawyer could say (i) (which is structurally parallel to (49c)).

(i) The only official a petition to whom on behalf of John has not yet been written is the president himself.

[9]While contextual and/or lexical help leads to definite improvements in acceptability with respect to such data as (49b) and (50), it cannot always achieve complete acceptability. Thus, some informants feel less easy with (i) of footnote 8 than with (50), even with appropriate scenarios. The reason for the lesser naturalness of (i) of footnote 8 is, I suspect, that the predicate a petition to -- on behalf of John is syntactically discontinuous, and thus harder to present (intonationally) as a unit.

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